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REMARKS

The Office Action dated April 22, 2004 was carefully reviewed. It is respectfully requested the Examiner reconsider the present application in light of the amendments and remarks herein.

The Examiner rejected claims 1-17 under 35 U.S.C. §103 as being unpatentable over U.S. Patent No. 6,580,916 B1 to Weisshaar et al., hereinafter Weisshaar in view of U.S. Patent No. 5,565,858 to Guthrie.

The present invention is directed to the problem of expensive upgrades and complicated modifications that are required add long range communication capabilities to a vehicle that is already equipped with a short-range remote-keyless entry system. Independent claim 10 of the present invention has been amended herein. Significant emphasis has been placed on the fact that the gateway device and how it interfaces with the long range communication system, translates a command from the long-range communication system and then communicates that same command, in its new protocol, to a short-range receiver system already in place on the vehicle.

According to the present invention, a method is provided for an interface with an existing short-range system through the use of a gateway mounted on the vehicle. The gateway does not place any new restrictions on the existing short-range system. Therefore, the present invention is portable and cost effective. The portability has the advantage of being easily removed from one vehicle and being installed in another, thereby making it useful to fleet and service vehicles.

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According to the present invention, the gateway device is mounted on the vehicle and requires only power and ground connections. It communicates with an existing short-range receiver that is already on the vehicle. The short-range receiver is already hard-wired to several functions of the vehicle as it is already in place to control these functions using commands received from a hand-held remote transmitter. The gateway on the vehicle expands the range of the vehicle's remote keyless entry functions without having to tap into the vehicle's electrical system. The gateway device on the vehicle can communicate with the short-range receiver in the same way the hand-held remote would typically communicate with the short-range receiver. However, according to the present invention, the gateway device is capable of receiving instructions from a long-range transmitter and translating those instructions into a protocol that can be handled by the short-range receiver.

In the method of the present invention the gateway device receives instructions from a long-range transmitter, such as an Internet, cellular phone or satellite transmission. The gateway device translates the command into a communication protocol that is compatible with the existing short-range receiver on the vehicle. Once translated into the new protocol, the command from the long-range communication device can be delivered to the short-range receiver.

Because the gateway device is mounted in close proximity to the short-range receiver it can communicate with the short-range receiver using an RF signal. The gateway device communicates the translated command to the short-range receiver using the radio frequency, such as 315 MHz, and the short-range receiver controls the

functions it is wired to. The gateway device does not need to be wired to anything on the vehicle, other than a power and a ground connection.

The gateway device uses the same communication protocol as a handheld transmitter, or key fob, would to communicate commands to the short-range receiver. The short-range receiver is already in communication with the functions that it is designed to control. Therefore, it is now capable of receiving instructions from either the hand-held remote, which is usually a key fob, or from the vehicle's gateway device. The present invention increases the range of an existing short-range system and eliminates the need for hardwired connections between the long-range transmitter and the devices being controlled by it.

In a simple, cost effective way, the present invention can increase the range of remote control from tens of meters to a virtually limitless range. There is no need for complex wiring connections or an intermediate communication provider to decipher and implement the commands.

As discussed in the previous response, filed March 8, 2004, Weisshaar does not teach or disclose a gateway device that receives a coded signal from a long-range wireless communication device, translates the coded signal into a different communication protocol, and then communicates the translated signal to the short-range receiver. The Examiner asserted that combining Weisshaar with Guthrie would result in the applicants' invention. It is respectfully asserted that Guthrie does not teach translating a command from long-range to short-range protocol.

The Guthrie reference is directed to the problem of tracking and locating nested storage bins. Guthrie proposes a device which locates a container from a group of

containers using an electronic tag. The electronic tags are capable of both long-range and short-range communication, the tags contain both a long-range transceiver and a short-range transceiver, but they do not communicate with each other. Either the short-range transceiver of one tag communicates with the long-range transceiver of another tag to assist in locating a container relative to other containers or vice-versa.

In order to avoid confusion between tags, and for the locating system to work properly, the commands for long-range and short-range master and slave tags, must be different. The master interrogation command is a long-range protocol, the slave response signal is a short-range protocol. These are two separate and distinct commands, and the tags are not translating a single command from a long-range protocol into a short-range protocol as taught by the present invention. Guthrie teaches the use of interrogation signals and response signals. It is respectfully asserted that Guthrie teaches sending master and slave signals, but does not teach or disclose translating a command from one communication protocol into another communication protocol.

Additionally, in Guthrie, the short-range portion of the antenna in Guthrie is configured to communicate with long range portion of adjacent antennas of other electronic tags. In the present invention, the short-range receiver is only configured to receive the translated command, at a short-range frequency, from the gateway device and only the gateway device communicates with the long-range receiver. In the Guthrie reference the long-range transceiver of each tag communicates with the short-range transceiver of an adjacent tag or with the interrogator unit. Further, Guthrie

does not teach or disclose the translated signal being used to control the operation of a vehicle function as taught by the applicants of the present invention.

Another major difference between Guthrie and the present invention is that the status of the tags, master and slave, can be reversed by receiving an "unslaved" command. In the present invention, neither the gateway device nor the short-range receiver in the present invention can be interchangeable. The devices must remain in their fixed configurations in order for the present invention to perform its intended function. The gateway has long-range receiving capabilities and short-range transmission capabilities. The short-range receiver is capable of receiving only short-range commands and is hard-wired to the devices it is being commanded to operate.

It is respectfully requested that the Examiner withdraw the rejection of the claims 10-17 under 35 U.S.C. §103.

Should the Examiner have any questions, comments or suggestions that may place the claims into better condition for allowance, he is respectfully requested to call the undersigned attorney.

Respectfully submitted,

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